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## The J-Curve Theory and the Black Urban Riots: An Empirical Test of Progressive Relative Deprivation Theory\*

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### Introduction

In the intellectual quest for a systematic understanding of the etiology of political and collective violence, relative deprivation theory has emerged as a prevalent explanatory device. One form of relative deprivation theory has received particularly strong scholarly attention through theoretical elaboration and empirical application to a variety of significant episodes of political and collective violence. This form is the progressive variety of relative deprivation and is most commonly referred to as the "J-curve."<sup>1</sup>

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<sup>1</sup>James C. Davies, "Toward a Theory of Revolution," in *Studies in Social Movements*, ed. Barry McLaughlin (New York: The Free Press, 1969), pp. 85-109. Hardly an anthology on revolution or social movements exists without including this work. James A. Geschwender, "Explorations in the Theory of Social Movements and Revolutions," *Social Forces* 47, 2 (December, 1968), 127-135, has attempted to elaborate the theory in terms of cognitive dissonance.

The J-curve resulted from an attempt by James C. Davies to reconcile what he perceived as two antithetical explanations of the phenomenon of revolution. According to Davies, two of the most famous students of revolution, Karl Marx and Alexis de Tocqueville, had arrived at completely opposite conclusions about the causes of revolution. Drawing on Marx's work in *The Communist Manifesto*, Davies argued that Marx perceived revolutions as most likely to occur when things get worse, when the misery of the proletariat increased relative to the economic standard of living of the bourgeoisie. In contrast, Tocqueville had advanced the theory that revolutions occurred when a previously oppressive regime released the yoke and created expectations it could not fulfill.<sup>2</sup>

Davies attempted to reconcile these divergent explanations by arguing that each of these perspicacious students of revolution had accurately rendered part of the picture of revolu-

<sup>2</sup>Alexis de Tocqueville, *The Old Regime and the French Revolution*, translated by Stuart Gilbert (Garden City, N.J.: Doubleday Anchor, 1955), p. 177. Tocqueville's observation that those parts of France which experienced the greatest degree of positive change also showed the greatest popular discontent is sometimes referred to as Tocqueville's paradox. Two different explanations of the paradox exist. The most common, and the one used by Davies and in this research, is the rising expectations thesis. A less well-known interpretation is referred to as "the present value of the past." This argues that present achievement is devaluated by the perception of past costs. See, in this regard, Charles Wolf, Jr., "The Present Value of the Past," mimeo (Santa Monica: The Rand Corporation, 1969).

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tion, but not the total picture. The complete depiction of the causes of revolution awaited the fashioning of both components into a single entity, which Davies engagingly accomplished. Davies argued that revolutions occur when a period of progress is followed by a period of sharp reversal and decline.

This rise-and-decline phenomenon can be read as: first Tocqueville then Marx. As Davies notes: "Revolutions are most likely to occur when a prolonged period of objective economic and social development is followed by a short period of sharp reversal. The all-important effect on the minds of people in a particular society is to produce, during the former period, an expectation of continued ability to satisfy needs — which continue to rise — and, during the latter, a mental state of anxiety and frustration when manifest reality breaks away from anticipated reality."<sup>3</sup> The theory is depicted in Figure 1 below.

<sup>3</sup>Davies, "Toward a Theory of Revolution," p. 86.

At a conceptual level the theory has a great deal of appeal. It is the type of theory that is very attractive to social scientists. It reconciles apparent contradictions in the work of two leading theorists and creates a parsimonious explanatory structure. In the search for conceptual simplicity, clarity and phenomenological regularity, it yields, at a minimum, heuristic success and beyond that has had ostensible empirical corroboration.

From the perspective of empirical theory, however, there are several primary empirical, methodological, and conceptual problems inherent in the structure and application of the J-curve. These problems have consequences for the J-curve theory specifically and relative deprivation theory generally.

It is the purpose of this research to examine some of these problems in the context of the application of the J-curve to the black urban riots. Although the primary objective of the research is to test the J-curve theory, consideration will also be given to the substantive

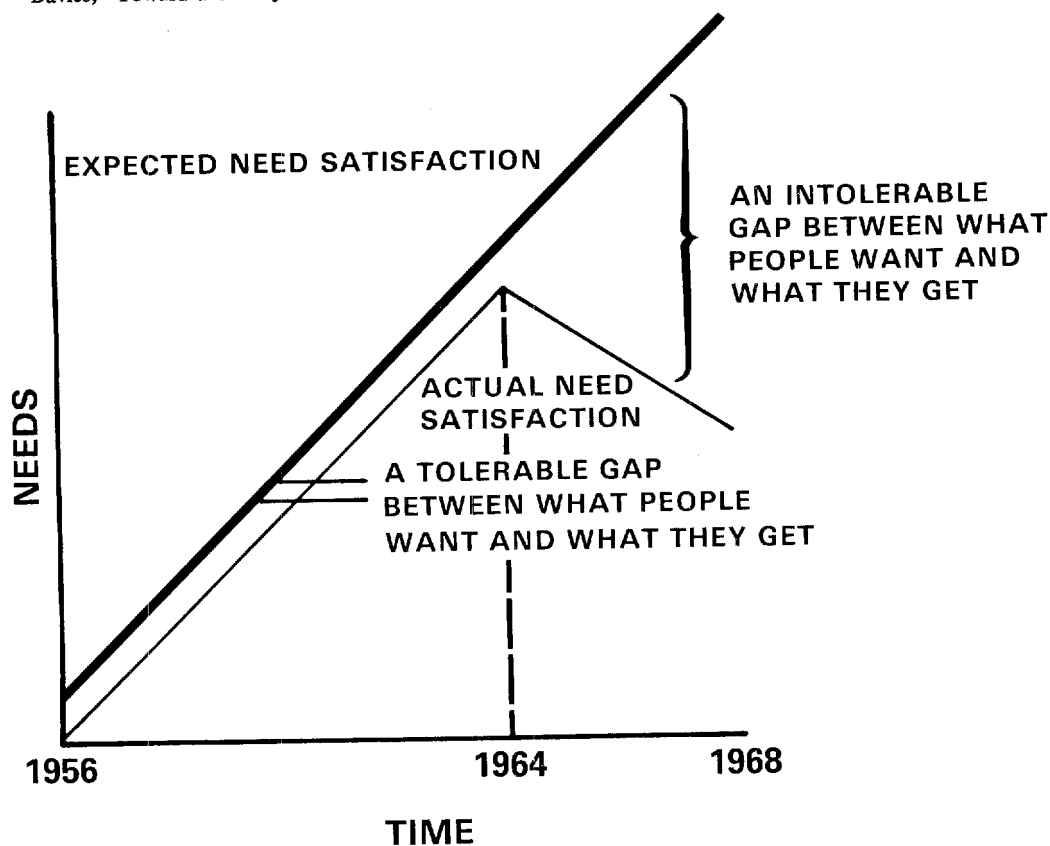


Figure 1.  
Pictorial Representation of Davies's J-Curve  
(Adapted from James C. Davies, "The J-Curve . . .," p. 691)

implications of the analysis as it affects our understanding of the riots.

Seemingly, a number of different events could have been chosen to examine the theoretical and empirical application of the J-curve. The black urban riots were chosen, in part, because Davies, himself, has applied his theory to this set of events.<sup>4</sup> Consequently, it is possible to follow his operationalizations, avoiding questions of operational comparability, and to assess the theory in an appropriate empirical setting. Moreover, one of the major criticisms which we level against the application of the J-curve, and most relative deprivation theories, is the problem of reductionism, sometimes referred to in the philosophy of science as the level-of-analysis issue: the validity of using data and concepts developed at one level of analysis to test theories formulated at a different level.<sup>5</sup> (This problem is comparable to the one raised by W. S. Robinson's<sup>6</sup> criticism of the use of aggregate correlations to draw inferences concerning the behavior of individuals.) A variety of data exists for the study of the black urban riots, making it possible to conduct analytical comparisons and reconstruct operationalizations at various analytical levels. As a result, the level-of-analysis problem can be empirically assessed rather than simply noted as a caveat affecting the research.

#### The Black Urban Riots and Relative Deprivation Theory

In his review of the sociological literature on the black urban riots, Clark McPhail<sup>7</sup> notes that

<sup>4</sup>James C. Davies, "The J-Curve of Rising and Declining Satisfaction as a Cause of Some Great Revolutions and a Contained Rebellion," in *The History of Violence in America*, ed. Hugh Davis Graham and Ted Robert Gurr (New York: Bantam Books, 1970), pp. 690-731.

<sup>5</sup>In the philosophy of science this problem is sometimes alluded to as a problem in reductionism. See, for example, May Brodbeck, "Methodological Individualism: Definition and Reduction," in *Readings in the Philosophy of the Social Sciences*, ed. May Brodbeck (New York: The MacMillan Co., 1968).

<sup>6</sup>W. S. Robinson, "Ecological Correlations and the Behavior of Individuals," *American Sociological Review*, 15 (June, 1950), 351-357. See also: L. A. Goodman, "Some Alternatives to Ecological Correlation," *American Journal of Sociology*, 64 (May, 1959), 610-625; O. D. Duncan and B. Davis, "An Alternative to Ecological Correlation," *American Sociological Review*, 18 (December, 1953), 665-666. O. D. Duncan, R. P. Cuzzort, and B. Duncan, *Statistical Geography* (Glencoe: The Free Press, 1961), note, as we do, that the problem arises wherever the units of analysis are changed. The change need not be from one distinct type of unit (e.g., individual) to a different type (e.g., group).

<sup>7</sup>Clark McPhail, "Civil Disorder Participation: A Critical Examination of Recent Research," *American*

research designs based on relative deprivation theory have played a prominent role in the attempts to explain these events. The results of these studies, in making a case for relative deprivation as a primary explanation of the riots, have been largely disappointing, despite some rather sophisticated and well-conceived methodological procedures.<sup>8</sup> As McPhail notes "...there is considerable reason for rejecting the sociological and popular cliché that absolute or relative deprivation and the ensuing frustration or discontent or despair is the root cause of rebellion."<sup>9</sup> On the basis of his observations, McPhail suggests reconsideration of Gurr's assertion that relative deprivation is "...as fundamental to understanding civil strife as the law of gravity is to atmospheric physics..."<sup>10</sup>

Davies, in his assessment of the urban riots, strikes a more confident note: "The Negro rebellion appears to have been preceded by the same J-curve of expectations that are first gratified and then frustrated."<sup>11</sup> In contrast to Davies's work, the studies cited by McPhail are generally based on analyses of socioeconomic and political characteristics of riot versus non-riot cities. Relative deprivation is usually measured in these studies by comparing various socioeconomic, census data characteristics of the black community with those of the white community. The underlying logic is that the riot cities should manifest greater disparities along these dimensions than the nonriot cities.

Davies's work is based on population characteristics; nonetheless, these are also aggregates.

*Sociological Review*, 36 (December, 1971), 1058-1073.

<sup>8</sup>See, in this regard, Milton Bloombaum, "The Conditions Underlying Race Riots as Portrayed by Multidimensional Scalogram Analysis: A Reanalysis of Lieberman and Silverman's Data," *American Sociological Review*, 33 (February, 1968), 76-91; Bryan T. Downes, "Social Characteristics of Riot Cities: A Comparative Study," *Social Science Quarterly*, 49 (December, 1968), 504-520; Stanley Lieberman and Arnold Silverman, "The Precipitants and Underlying Conditions of Race Riots," *American Sociological Review*, 30 (December, 1965), 887-898; Seymour Spilerman, "The Causes of Racial Disturbances: A Comparison of Alternative Explanations," *American Sociological Review*, 35 (August, 1970), 627-649; and Jules Wanderer, "An Index of Riot Severity and Some Correlates," *American Journal of Sociology*, 74 (March, 1969), 500-505.

<sup>9</sup>McPhail, "Civil Disorder Participation," p. 1064.

<sup>10</sup>Ted Robert Gurr, "Urban Disorder: Perspectives From the Comparative Study of Civil Strife," in *Riots and Rebellion: Civil Violence in the Urban Community*, ed. Louis H. Mascotti and Don R. Bowen (Beverly Hills: Sage Publications, 1968), p. 52.

<sup>11</sup>Davies, "The J-curve," p. 717.

The index for measuring relative deprivation is constructed by dividing family income by average years of schooling for the total and nonwhite populations. The ratio of the resulting nonwhite quotient to the white quotient is described as a measure of nonwhite satisfaction. The nonwhite satisfaction ratio is then plotted from 1940 to 1967 to determine whether a J-curve can be traced for the period of the riots. The numeric data and plot are presented in Table 1 and Figure 2 below.

Although in some remote fashion Figure 2 might be construed to illustrate a J-curve, the reversal in need fulfillment takes place during the wrong years — predicting a peak of unrest in the mid-1950s. Despite this, the data from the black urban riots are not seen as disconfirming the theory. Davies simply argues that the riots needed the exacerbation of southern violence a decade later to produce the aggression that began with the frustration demonstrated by the ratio of education to income.<sup>12</sup>

This eclectic interpretation of the data raises issues concerning the validity of the J-curve as an explanation of the urban riots. Moreover, Davies's logic, as that of his compeers in

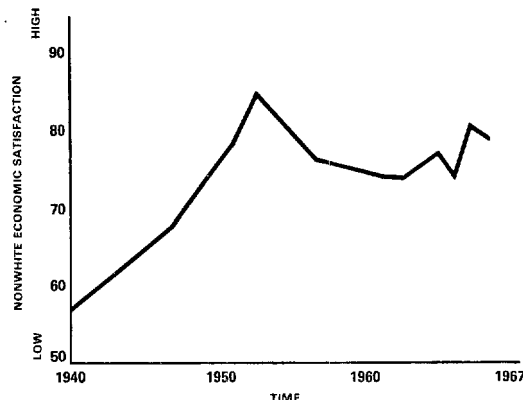


Figure 2.  
Index of Nonwhite Economic Satisfaction  
(Adapted from James C. Davies,  
"The J-Curve. . .," p. 724)

<sup>12</sup>*Ibid.*, p. 724.

Table 1. Davies's Origin and Time Sequence of Black Frustration  
(adapted from James C. Davies, "The J-Curve. . .," p. 726)

Year	Average Family Income Divided by Average Years of Schooling		Nonwhite Satisfaction	Nonwhite Frustration
	Total Population	Nonwhite Population	Column 2 as % of Column 1	Column 3 from 100%
1940	\$1231 = 146.3 8.4	\$ 489 = 84.3 5.8	57.5	42.5
1947	3031 = 336.8 9.0	1614 = 233.9 6.9	69.4	30.6
1950	3319 = 356.9 9.3	1869 = 274.9 6.8	77.0	23.0
1952	3890 = 385.1 10.1	2338 = 329.3 7.1	85.8	14.5
1957	4971 = 469.0 10.6	2764 = 359.0 7.7	76.5	23.5
1960	5620 = 530.2 10.6	3233 = 394.3 8.2	74.4	25.6
1962	5956 = 522.5 11.4	3330 = 387.2 8.6	74.1	25.9
1964	6559 = 560.6 11.7	3839 = 431.3 8.9	77.0	23.0
1965	6951 = 589.6 11.8	3995 = 443.8 9.0	75.3	23.7
1966	7436 = 619.7 12.0	4628 = 503.0 9.2	81.2	18.8
1967	a	a	78.9	20.2

<sup>a</sup>Absent on original.

sociology cited by McPhail,<sup>13</sup> is not congruent with the empirical and theoretical requirements of relative deprivation theory. The requisite level of analysis has been violated in the assertion that the presence of aggregate, non-perceptual characteristics ostensibly related to black frustration is an appropriate indication that individual black people are indeed experiencing frustration.

The importance of this logical gap is best understood by looking at the psychological basis of relative deprivation theory. Relative deprivation theory claims theoretical descent from the psychological research of John Dollard and his Yale colleagues.<sup>14</sup> The Yale team established what has come to be known as the frustration-aggression hypothesis. This hypothesis, as it has evolved, proposes that frustration produces various responses, one of which is aggression, and if nonaggressive responses do not relieve the frustration, the probability of an aggressive response increases.<sup>15</sup>

Relative deprivation theory has built upon this hypothesis in viewing relative deprivation as a major component of the chain of events leading to aggression. It is this deprivation that produces frustration; frustration produces aggression; aggression produces civil violence; and civil violence can be translated into political violence.<sup>16</sup>

The language of relative deprivation theory is replete with reference to this psychological foundation. As Davies notes: "Political stability and instability are ultimately dependent on a state of mind, a mood, in a society. Satisfied or apathetic people who are poor in goods, status, and power can remain politically quiet and their opposites can revolt. . . ."<sup>17</sup>

Relative deprivation is, thus, an individual experience, and, despite objective, aggregate indicators, relative deprivation can only take place if people perceive themselves to be deprived. Economic indicators may demonstrate that the availability of goods, status, or power may be low or may have diminished

from some previous level, but this does not demonstrate that people perceive themselves to have been deprived and are consequently discontent.

With the exception of work by Grofman and Muller,<sup>18</sup> relative deprivation theorists generally use the language and theoretical foundation of individual data but perform their empirical testing with aggregate social and economic indicators. The chasm that separates objective societal conditions from subjective perceptions seems to have trapped many researchers who have made enthusiastic and confident assertions about the perceptual basis of individual behavior from theoretically remote aggregate indicators.<sup>19</sup>

Given the above considerations, how would Davies's index appear if he had obtained individual-level data (overlooking momentarily the entire question of perceptual vs. nonperceptual data and simply looking at the difference in the unit of analysis)? From our individual data, taken from the Michigan Survey Research Center election studies from 1956-1968, Davies's operationalizations were replicated and his index was reconstructed. The data are displayed below for both whites and blacks and by region in Table 2 and Figure 3.

The above data and Figure 3 do not demonstrate anything as parsimonious as a J-curve. The index of black frustration varies without consistent pattern, and the overall impression it imparts is that the differences between blacks and whites are so trivial as to be substantively inconsequential. In four out of the seven years analyzed, blacks, contrary to the interpretation originally derived from Davies's data, receive a slightly higher income return for years of

<sup>18</sup>Bernard N. Grofman and Edward N. Muller, "The Strange Case of Relative Gratification and Potential for Political Violence: The V-Curve Hypothesis," *The American Political Science Review*, 67 (August, 1973), 514-539.

<sup>19</sup>In addition to the sociological literature noted above in footnote 8, see, for example: Ivo K. Feierabend, R. L. Feierabend, and B. A. Nesvold, "Social Change and Political Violence: Cross-National Patterns," in *Anger, Violence and Politics: Theories and Research*, ed. Ivo K. Feierabend, Rosalind L. Feierabend, and Ted Robert Gurr (Englewood Cliffs, N.J.: Prentice Hall, Ivo K. Feierabend, Rosalind L. Feierabend, "Aggressive Behaviors within Politics 1948-1962: A Cross-National Study," *Journal of Conflict Resolution*, 10 (September, 1966), 249-271; Raymond Tanter and Manus Midlarsky, "A Theory of Revolution," *Journal of Conflict Resolution*, 11 (September, 1967), 264-280; and Ted Robert Gurr, "A Causal Model of Civil Strife: Using New Indices," in *Anger, Violence and Politics*, ed. I. K. Feierabend et al. Much to his credit, of all the authors cited, Gurr, *Ibid.*, p. 210, is the only one to acknowledge the level-of-analysis problem.

<sup>13</sup>McPhail, "Civil Disorder Participation," p. 1059.  
<sup>14</sup>John Dollard et al., *Frustration and Aggression* (New Haven: Yale University Press, 1939).

<sup>15</sup>This statement is based on the elaboration of Dollard's work by Neal E. Miller et al., "The Frustration-Aggression Hypothesis," *Psychological Review*, 48 (July, 1941), 337-342. See also: Leonard Berkowitz, *Aggression: A Social Psychological Analysis* (New York: McGraw Hill, 1962), in *Advances in Experimental Social Psychology*, Volume 2, ed. Leonard Berkowitz (New York: Academic Press, 1965).

<sup>16</sup>Gurr, *Why Men Rebel* (Princeton: Princeton University Press, paperback, 1970).

<sup>17</sup>Davies, "The J-curve," pp. 86-87.

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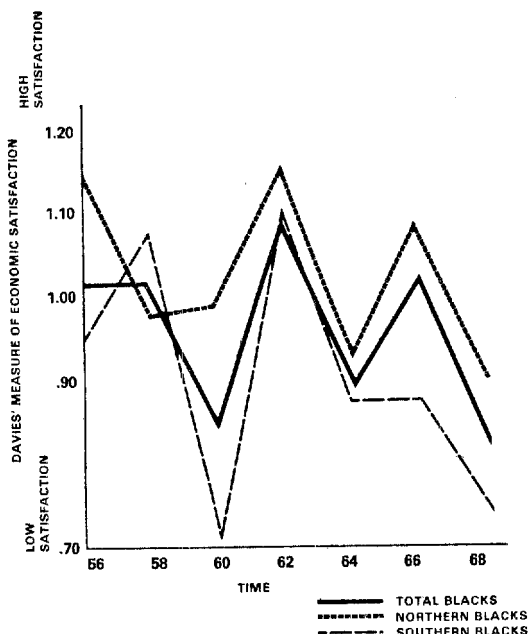


Figure 3.  
Index of Black Economic Satisfaction  
from Individual Data

education than do whites. This is not as surprising a finding as it first appears (as we will demonstrate below), but is rather a penetrating commentary on the inappropriateness of the index as a measure of black frustration. Although income generally varies with education, it is those with lower education who receive a higher per annum income return for unit of education. Higher education yields a considerable amount more money over a working lifetime. On a per annum basis, however, it

takes many increments in years of schooling to produce modest increments in income. Black people tend to cluster at the bottom end of the education distribution where the ratio of income to education is highest. As a result, black people have higher income to education ratios. This is not to argue the absurd position that whites are frustrated relative to blacks. Rather, what is discerned from this finding is the futility of attempting to measure a perceptual concept such as frustration with aggregate, objective indicators. Moreover, it is solely because Davies's index is based on a ratio of two aggregates that the inappropriateness of the index is not readily discernible. The manner in which the aggregations conceal what is occurring can be readily observed in Table 3 below. In Table 3 the level of education is controlled by partition design, and the data indicate that it is the lower levels of education that yield the best ratio of income to years of schooling.

Having demonstrated the inappropriateness of Davies's index for testing the J-curve theory in the context of the urban riots, we attempted a refinement of the operationalization. Given relative deprivation theorists' reliance on objective data, we were interested in whether changing the unit of analysis, from aggregate to individual, and refining the measurement might yield something similar to a J-curve or other theoretically parsimonious configuration. Also, we were interested in observing if more sophisticated operationalizations of the objective but individual-level data would correspond to our perceptual measures (see below).

To accomplish this refinement in measurement, two objective measures based on the regression of income on education, after parti-

Table 2. Individual-Level Objective Data Measures of  
Davies's Operationalization of Black Economic Satisfaction<sup>a</sup>

Year	Average of Each Head's Income Score Divided by Each Head's Years of Schooling Score <sup>b</sup>						Black Satisfaction Ratio of Column 2 to Column 1		
	Total White	North White	South White	Total Black	North Black	South Black	Total Black	North Black	South Black
1956	1.68	1.72	1.55	1.72	1.99	1.47	1.02	1.15	.95
1958	1.62	1.62	1.61	1.66	1.60	1.74	1.02	.98	1.08
1960	.55	.55	.51	.47	.54	.40	.85	.99	.71
1962	1.84	1.91	1.70	2.01	2.20	1.88	1.09	1.15	1.10
1964	.59	.59	.59	.53	.56	.52	.90	.93	.88
1966	.54	.55	.52	.55	.59	.46	1.01	1.08	.88
1968	.70	.70	.70	.58	.63	.52	.83	.90	.75

<sup>a</sup>Scores are not translatable into dollar terms as they reflect the relationship between measurements on coding categories. Codes are not always comparable from year to year, but this is of no consequence since we are interested in the differences in any one year between whites and blacks and how these differences vary longitudinally. Column 3, the nonwhite satisfaction index, multiplied by 100 is similar to the nonwhite satisfaction index in Table 1.

<sup>b</sup>Only heads of household were used.

Table 3. Education by Income Quotients with Level of Education, Race, and Region Controlled<sup>a</sup>

	All Educational Groups <sup>b</sup>	Grade School	High School	College and Above
Total white	1.84 <sup>c</sup>	3.10	1.53	0.86
North white	1.91	3.13	1.57	0.85
South white	1.70	3.00	1.43	0.88
Total black	2.01	2.67	1.08	0.85
North black	2.20	3.77	1.11	0.98
South black	1.87	2.17	1.05	0.55

<sup>a</sup>Data are from 1962 only since the issue is a cross-sectional one and not a longitudinal one. The year was chosen at random.

<sup>b</sup>Heads of household only.

<sup>c</sup>Score is the average of each head's income score divided by each head's year of schooling score.

tioning race and region, were created. One of these is called the "differ variable," and it computes the difference between predicted income for blacks subtracted from predicted income for whites, when income is regressed against education. The second and more elaborate measure is called the "discrim variable," and it is constructed by subtracting a black individual's actual income from the income he would expect if he were white.<sup>20</sup> This

<sup>20</sup>This latter operationalization was suggested, in part, by Otis D. Duncan, "Discrimination Against

creates two objective individual-level measures of black relative deprivation. The results of these operationalizations are displayed below in Table 4 and Figures 4 and 5.

Regardless of operational differences, the trends for Figures 4 and 5 demonstrate the same time-series pattern. In neither case do we observe a J-curve. It is also important to note the divergences between the black population in each of the two regions. The national configuration is often an averaging of radically different trends between northern blacks and southern blacks. (This demonstrates the importance of looking at specific groups rather than treating the society as a monolith, or failing to make important distinctions within

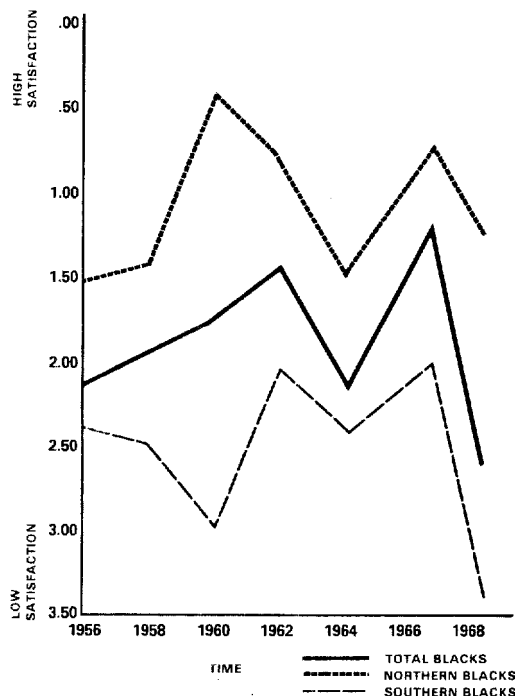


Figure 4.  
Differ Operationalization of  
Black Economic Satisfaction

Negroes," in *Social Intelligence for America's Future*, ed. Bertram M. Gross (Boston: Allyn and Bacon, 1969). Discrimination is measured by taking the slope and intercept of the regression equation for whites and plugging in the observed independent variable (education) scores for blacks. The resultant predicted dependent variable (income) scores for blacks are subtracted from the blacks' actual score on the dependent variable. The residual [ $Y_p$  (if respondent were white) -  $Y_a$ ] is the measure of deprivation.

A wholly individual measure, based on differences between actual and predicted income, was desired for the "differ" operationalization. Such a measure would have been very similar to the one used for the "discrim" operationalization. In the calculation of measures of association, the type of measure is feasible. In calculating summary measures for the purpose of obtaining averages for blacks, this is not possible. In the case of any individual black, the "differ" is the residual between predicted income and actual income. The average of the residuals [ $\sum (Y_i - Y_a)/N$ ] however, always equals zero. The operationalization is meaningful for an individual black, but it aggregates to zero when cumulated for the group. To provide an analogous measure for the purpose of calculating an average, the average difference of predicted income for whites and blacks is calculated, given each groups' respective regression equation. Thus the average score is based on  $\sum Y_i/N$  for blacks subtracted from  $\sum Y_i/N$  for whites.

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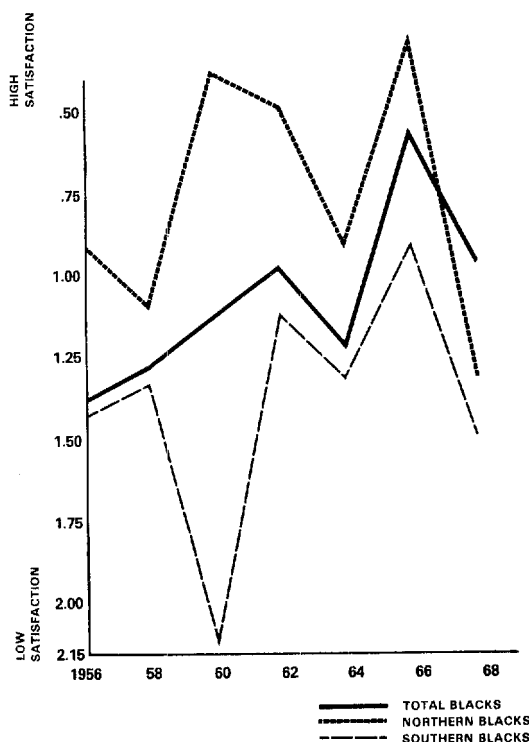


Figure 5.  
Discrim Operationalization of  
Black Economic Satisfaction

groups, a failure often necessitated by aggregate analysis.)

Being concerned with the urban riots, a northern phenomenon, we must focus specifically on the trends for northern blacks. Although the data (see Figures 4 and 5) do not follow the J-curve pattern, from 1958–1960 there is some indication of rising need fulfillment, and from 1960–1964 there is some indication of the loss of previous gains. But

from 1964 to 1966 there is another rise followed by a decline in 1966 through 1968. The J-curve interpretation is rejected because the rising need-fulfillment pattern is only of two year's duration, hardly commensurate with the long-term increases required by the theory; and the overall pattern, despite segments of rise and decline, is not commensurate with the J-curve.

What the data do reveal most dramatically is a series of extreme fluctuations and changes. There is neither a constant trend of improvement, deterioration, nor stability but a series of positive surges and negative declines. This pattern of instability may be causally related to the urban riots. Certainly, a wide variety of research<sup>21</sup> has argued that political violence is a function of the ambiguity and dissonance associated with social change, even when the pattern of change is positive. Before pursuing in any detail these implications from the objective data, it is necessary to first determine if these patterns can be validated by perceptual data — especially given the methodological and conceptual issues which were raised with regard to the use of even individual-level, objective data. It is to this issue that we now turn.

#### The Correspondence Between Objective and Perceptual Indicators of Relative Deprivation

The differ and discrim operationalizations are a marked improvement over the kinds of

<sup>21</sup>Murray Edelman, *Politics as Symbolic Action: Mass Arousal and Quiescence* (Chicago: Markham, 1971); Grofman and Muller, "The Strange Case of Relative Gratification and Potential for Political Violence"; Feierabend et al., "Social Change"; Seymour Martin Lipset, *Political Man* (Garden City: Anchor Books, 1963), esp., pp. 54–55; Michael Aiken et al.,

Table 4. Individual-Level, Regression-Based Objective Measures of Black Economic Satisfaction

Year	Differ Operationalization			Discrim Operationalization		
	Total Blacks	North Blacks	South Blacks	Total Blacks	North Blacks	South Blacks
1956	2.12 <sup>a</sup>	1.50	2.37	1.35 <sup>b</sup>	0.87	1.40
1958	1.95	1.40	2.47	1.26	1.07	1.31
1960	1.77	0.43	2.95	1.10	0.36	2.12
1962	1.53	0.81	2.03	0.96	0.53	1.10
1964	2.15	1.46	2.40	1.21	0.91	1.31
1966	1.25	0.72	1.99	0.55	0.29	0.91
1968	2.50	1.35	3.40	1.31	0.94	1.47

<sup>a</sup>The differ operationalization measures the difference of white predicted income minus black predicted income. The differ is computed by taking  $\sum Y_i/N$  for whites minus  $\sum Y_i/N$  for blacks. The operationalization is modified when based on noncumulated individual scores. See Footnote 20.

<sup>b</sup>The discrim operationalization is measured by taking the average of the residual between the predicted income for blacks (assuming they are white, by taking the predictions based on the intercept and slope of the white regression equation) minus black actual income.



information and measures generally available to relative deprivation researchers, since these are based on individual rather than aggregate measures. There still, however, remains the very important question of whether or not even individual-based objective measures can be substituted for perceptual measures.

This issue is far more complex than it initially appears and must be broken down into two component issues. First, there is the question of whether valid substitutions can be made on a data-point-by-data-point basis. Second, it is conceivable that the general pattern resulting from different types of data might be quite similar, although the points themselves might be unrelated for any given year. (One explanation for this phenomenon is the time gap between an event and its psycho-

logical recognition.) In such instances the general theoretical interpretation provided by the two data sets might be the same, despite the specific temporal differences.

The perceptual indicators are based on three items, dealing with financial need satisfactions, from the 1956 through 1968 Michigan election studies. These items are: (1) whether the respondent (R) perceived his financial situation as being better or worse than the year before; (2) R's expectation of his future financial prospects; and (3) R's perception of his financial satisfaction. Each of these perceptual indicators was correlated with the three preceding individual-level, objective measures of relative deprivation: (1) the reoperationalized Davies index; (2) the differ operationalization and (3) the discrim operationalization. The correlation matrix for the six items — three perceptual and three objective — is displayed in Table 5 below.

Some of the data in the above matrix are presented solely for informational purposes, for we did not anticipate that all the interrelation-

*Economic Failure Alienation and Extremism* (Ann Arbor: The University of Michigan Press, 1968); Barrington Moore, Jr., "Revolution in America," *New York Review of Books*, 12 (January 30, 1969), 6-12.

Table 5. Interrelation Matrix of Objective and Perceptual Data

Year	R's Perception of the Trend of Finances			R's Perception of Future Financial Prospects			R's Perception of Financial Satisfaction		
	Total Black	North Black	South Black	Total Black	North Black	South Black	Total Black	North Black	South Black
Davies's Operationalization									
1968	-.053 <sup>a</sup>	-.098	-.024	-.109	-.086	-.161	.148 <sup>c</sup>	.219	.016 <sup>b</sup>
1966	.095	.021	.256	.070	-.223	.449			
1964	.112	.214	.051	.068	-.008	.106	.136	.235	.081
1962	.412	.384	.432	.025	-.284	.294			
1960	.374	.374	.282	.233	.204	.326	.401	.327	.479
1958	.091	.163	.018	.038	-.054	.176	.112	.254	-.093
1956	.023	-.132	-.019	-.140	-.318	-.012	.011	.021	.002
Differ Operationalization <sup>d</sup>									
1968	-.053	-.097	.012	-.123	-.094	-.143	.131	.216	-.008
1966	.149	.203	.101	.018	-.085	.096			
1964	.274	.359	.231	.116	-.076	.247	.195	.240	.179
1962	.492	.636	.355	.196	-.009	.383			
1960	.665	.743	.405	.259	.431	.231	.410	.414	.369
1958	.438	.623	.293	.007	-.275	.193	.276	.561	.052
1956	.281	.436	.195	.026	-.079	.053	.048	.098	.043
Discrim Operationalization									
1968	-.073	-.131	-.051	-.154	-.144	-.200	.121	.198	.016
1966	.144	.174	.127	-.014	.085	.096			
1964	.232	.302	.180	.079	.058	.159	.205	.243	.189
1962	.492	.631	.378	.184	-.030	.353			
1960	.649	.735	.389	.264	.431	.254	.421	.417	.489
1958	.323	.496	.181	-.002	-.197	.126	.256	.486	.031
1956	.201	.388	.022	-.004	-.080	-.013	.028	.063	.022

<sup>a</sup>Entries are Pearson's product moment correlations.

<sup>b</sup>Life satisfaction was used in 1968 due to change in protocol.

<sup>c</sup>Perceptual variable unavailable for 1966 and 1962.

<sup>d</sup>See Footnote 20 for a discussion of this operationalization.

ships would constitute an accurate test of the correspondence between objective and subjective indicators. The Davies's measure has been shown to have little value in assessing relative deprivation. Also future financial expectations are significantly different in conceptual meaning from current assessments of discrimination, and it was anticipated that future financial expectations would not correlate well with the objective measure. The main areas of interest within the matrix revolve around the correspondence between the differ and discrim operationalizations and R's perceived trend of finances and R's financial satisfaction.

In evaluating the matrix, the correlation coefficient of .25 was chosen as the minimum level for accepting a relationship between indicators.<sup>22</sup> Even at this obviously low level, the objective operationalizations, on a point-by-point comparison, failed to demonstrate a relationship with the perceptual indicators. In the case of the relationship between the differ and discrim operationalizations and financial satisfaction, the .25 hurdle is crossed only 40 per cent of the time for northern blacks and 20 per cent of the time for southern blacks. The relationship between the discrim variable and the perceived trend of one's finances shows little overall consistency for the total black population, despite good results generally for northern blacks. In this case the .25 level is exceeded 71 per cent of the time.

The relationships between the differ and discrim operationalizations on the one hand and the perceived trend of one's finances on the other are the best of the group, although still not very encouraging. These correlations exceed the .25 mark 71 per cent of the time for the northern black population but only 43 per cent (for differ) and 28 per cent (for discrim) of the time in the southern black population. Interestingly, the inappropriateness of the Davies's operationalization seems further underscored by its weak correspondence with the perceptual

measures, being the most poorly related of the three.

The strength of the correspondences between the differ and discrim operationalizations and the trend of finances variable is at times quite good. Note, for example, the relationship for northern blacks from 1958 through 1962. We are not sure why this correspondence exists and then radically tapers off, reaching a negative relationship in 1968. And we are reluctant to invoke any substantive explanations since the overall pattern of the data is not encouraging from the perspective of point-by-point substitutions. Interpreting the few cases that have correspondences might well tend to force systematic meaning where the overall picture seems to indicate that there is none.

Whether this lack of correspondence is also true of the trends of the subjective and objective data sets (as distinct from point-by-point comparisons) will be considered in the next section. We also wish to note that the analysis has not assessed the possibility that in more dramatic circumstances, such as full-scale revolutions, the convergence and salience of events might be so overwhelming as to be reflected in various kinds of assessments. Although our analysis does not preclude this possibility, at present, this is still an article of faith which has not been subjected to empirical verification.

#### A View of the Urban Riots from Perceptual Indicators

If Davies's argument is correct and if our objective data are too remote from the structure of the theory to test it adequately, our empirical observations of perceptual data should demonstrate the following results.

(1) From 1956 to 1964 the proportion of northern blacks perceiving positive changes in the trend of their finances should increase steadily.

(2) After 1964 the proportion of northern blacks perceiving positive changes in the trend of their finances should begin to decline continually and substantially.

The above two points express succinctly and in empirically relevant terms the essence of the J-curve as applied to the requisite conditions of the urban riots. In addition to this depiction of the rise and decline scenario, there is another equally important consideration. This relates to the untested assumption of relative deprivation theory generally and the J-curve specifically that one's current trend of need fulfillment is positively and strongly related to future financial expectations. In the context of the J-curve

<sup>22</sup>Correlations of .25 in social science data are generally viewed as quite favorable. In this case, however, we have chosen to view .25 as a minimal level of acceptance because a criterion for the establishment of a valid substitute measure for different levels of analysis is being considered. Without engaging in a lengthy discourse on the philosophical issues involved in the level-of-analysis question, it is clear that such substitutions do involve an issue of validity, i.e., whether one measure is a valid substitute for another. Correlational requirements for measures of reliability and validity are far greater than for mere assertions of substantive importance. See for example, Fred N. Kerlinger, *Foundations of Behavioral Research* (New York: Holt, Rinehart and Winston, Inc., 1965), 444-462.

this of course occurs during the period of rising gratifications. Its occurrence, however, is one of the most vital aspects of the theory. For if there is no correspondence between current levels of need fulfillment and future expectations of need fulfillment, the theory is wholly untenable. Without such correspondences an intolerable gap can not occur (see Figure 1). These observations lead to two additional considerations:

(1a) From 1956 to 1964 the trend of finances for northern blacks should be positively and strongly related to future financial expectations.

(2a) After 1964, the pre-1964 relationship between the trend of finances for northern blacks and their future financial expectations should reverse itself.

The rejection of *any* one of the above four statements would result in a rejection of the J-curve theory as an explanation of the black urban riots. Nonetheless, we will review the results as applied to all four statements because we are not only interested in testing the theory, but we are also concerned with the presence or absence of empirical justification for the theory's basic assumptions. Moreover, special concern surrounds statements 1a and 2a because they are also fundamental to the assumptions of relative deprivation theory generally.

Before examining the data, there is an item concerning the demarcation of time frames for rising and declining need fulfillment that merits attention and commentary. This concerns the appropriateness of looking at the post-1964 period as the likely area of decline and hinges on the interpretation of the Watts riot which occurred in August of 1965. If this event is perceived as having initiated the riot phase, then the period before 1964, it has been suggested, is the more appropriate place to look for financial reversals. Watts would then be considered as the point of the "intolerable gap," where the disparity between continually rising expectations and falling actual need fulfillment culminates in civil disorder.

Such issues might have been readily resolved if the J-curve theory had been empirically more rigorous in specifying the operationalization of the "intolerable gap." One of the difficulties with all forms of *post hoc* theory is that they manifest an empirical prowess greater in appearance than in fact. The requirements of a theory tested through prediction would of necessity mandate an operationalization of critical concepts. Where theory is constructed after instead of before prediction, such empirical precision is too easily overlooked. This lack of specification further complicates analy-

sis because all forms of civil disorder, even coup d'etats, are often a series of events rather than a single event. These events can occur in close temporal proximity, but, sometimes, as in the case of the riots, there is substantial temporal space between them. As to which single event among the set of events coincides with the crucial intolerable gap is an issue that is generally ignored.

Further specification by the original theory could have provided some assistance in properly assessing the role of Watts in this scenario. However, even if Watts is considered the initiator of this phase of riot activity, the two-year gap between Watts and the preponderance of riot activity strongly suggests that the downward cycle of perceived need fulfillment began about 1964, was in evidence by August, 1965, but it did not approach the intolerable gap phase until 1967.

An interpretation of Watts as coming at the bottom of the need fulfillment spiral would have to focus on the sharp decline from 1960 to 1962 in Table 6 and Figure 6. (Interpretation is restricted to the perceptual data because they constitute the best indicators.) But this analysis would be undermined by the sharp rise in need fulfillment occurring from 1962 to 1964. It would also be forced to ignore the important cycle of fluctuation and change throughout the data set, not to mention the two-year gap between Watts and the other riots. For these reasons, we have chosen to maintain 1964 as the point of demarcation between rising and declining need fulfillment in the hypotheses above.

Turning now to the data and consideration of increased need fulfillment, Table 6 and Figure 6 below demonstrate that blacks did not experience increased need fulfillment from 1956 to 1964. Instead of a trend of continual improvement, there exists a series of sharp fluctuations, not at all unlike the results obtained with the objective data. If the northern blacks are compared to northern whites, the contrast in this regard is rather marked. Across time relatively stable percentages of northern whites perceive their finances as improving, while percentages of northern blacks experiencing the same perception fluctuate dramatically.

Except for the tremendous upsurge in 1964, characteristic of all groups, northern whites show a pattern of marked stability. Excluding 1964, the range of responses varies from a low of 34 per cent to a high of 39 per cent. Given considerations of sampling error, it is not unreasonable to assume that a straight line would, with the exclusion of 1964, accurately characterize these data. Southern whites also

show a fairly stable pattern, but the fluctuation that does exist ensues from the close temporal proximity between the highest and lowest points in the longitudinal distribution. Financial optimism triumphed in 1964 but crashed disastrously by 1966. Outside of that sharp downward spiral the pattern is seemingly constant. Even with due consideration of the sharp drop from 1964 to 1966, the range for southern whites runs from a low of 29 per cent to a high of 41 per cent, with a difference of only 12 per cent.

The argument for the stability of white perceptions is best appreciated by looking at the corresponding data for the blacks. Northern blacks run a gamut of alternate high to low and low to high fluctuations, with a range from 21 per cent to 46 per cent, or five times that of northern whites. For southern blacks the pattern is similar except there is somewhat more stability, each low ebb is not necessarily followed by another high point, and the period from 1964 on is virtually constant. The range is 23 per cent, or nearly twice that of southern whites.

Interestingly, if the same longitudinal relationships are examined from the perspective of the respondents' conception of their financial satisfaction or their expectation of their future

financial satisfaction, the same phenomenon of white stability and black instability is repeated (see Tables 7 and 8 below).

The data clearly indicate that *it is the northern black population that experiences the greatest instability*. Even incorporating the impact of 1964 — a year which appears to have produced sharp financial optimism among all groups — the variation among whites in both the North and South is nowhere nearly as sharp as it is for blacks; and it is again the northern blacks, not the southern blacks, who illustrate the greatest instability.

Is it likely that this series of fluctuations has emerged as a consequence of systematic differences in sampling design between off-year and presidential election year studies? Or is the instability, perhaps, due to the differences in sample size between blacks and whites, with blacks demonstrating more instability simply because of smaller Ns? The pattern of fluctuation and change observed in Figure 6 and Table 6 can not be dismissed as mere aberrations in the data resulting from systematic changes in the sampling frame between presidential and nonpresidential election studies. The Survey Research Center did not use different sampling frames in the off-year and presidential year studies. From 1956 through 1960, the identical

Table 6. R's Perception of the Trend of his Financial Situation by Race and Region

	1956	1958	1960	1962	1964	1966	1968
Northern white							
Better	39%	34%	36%	35%	48%	37%	34%
Same	43	45	47	46	38	37	45
Worse	19	22	18	20	14	26	21
(Total)	101% <sup>a</sup>	101% <sup>a</sup>	101% <sup>a</sup>	101% <sup>a</sup>	100%	100%	100%
(N)	(1168)	(1165)	(1179)	(777)	(3017)	(797)	(1644)
Northern black							
Better	33%	21%	46%	21%	44%	33%	32%
Same	43	49	30	52	40	41	44
Worse	24	30	25	27	16	27	25
(Total)	100%	100%	101% <sup>a</sup>	100%	100%	101% <sup>a</sup>	101% <sup>a</sup>
(N)	(63)	(84)	(77)	(52)	(184)	(78)	(110)
Southern white							
Better	40%	32%	35%	38%	41%	29%	33%
Same	44	46	49	47	44	45	50
Worse	17	22	17	15	16	26	17
(Total)	101% <sup>a</sup>	100%	101% <sup>a</sup>	100%	101% <sup>a</sup>	100%	100%
(N)	(425)	(464)	(544)	(382)	(1146)	(322)	(690)
Southern black							
Better	28%	32%	19%	17%	40%	40%	38%
Same	51	32	42	50	43	35	48
Worse	22	37	40	33	17	25	14
(Total)	101% <sup>a</sup>	101% <sup>a</sup>	101% <sup>a</sup>	100%	100%	100%	100%
(N)	(83)	(76)	(91)	(58)	(234)	(57)	(132)

<sup>a</sup>Sums to more than 100 per cent because of rounding.

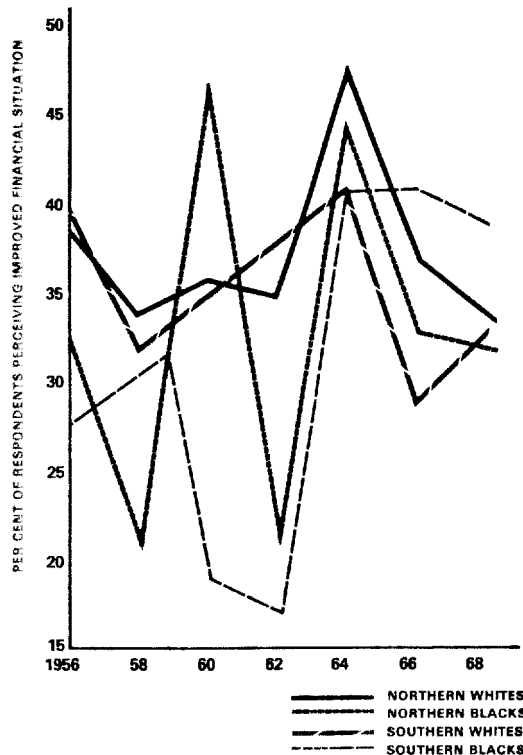


Figure 6.  
Percentage of Respondents Perceiving the Trend  
of their Financial Situation as Improving

sampling frame was used. The stability of this design was reinforced by the presence of a large panel study for this time period. Consequently, the sharp fluctuations and changes observed in Figure 6, for the 1956 through 1960 period, can hardly be attributed to changes in the sampling frame. In 1962 the sampling design was updated and the resulting frame was used through and including 1968, making it impossible to attribute changes observed in this period to changes in the sampling design. Even the changes between 1960 and 1962 can not be attributed to the change in sampling frames, for the large metropolitan self-representing PSUs, where some two-thirds of the northern blacks reside, remained as self-representing units.<sup>23</sup>

How about the question of sample size? Can the changes be attributed to differences in sample size for blacks and whites? Do the blacks display more volatile patterns simply because their sample size is smaller? This argument is untenable because it overlooks the

crucial implications of the Law of Large Numbers (Bernoulli's theorem).<sup>24</sup> The critical question is not whether the black sample is smaller or larger than the white sample. The critical question is whether the black sample, both in the North and South, is sufficiently large to meet the requirements of Bernoulli's Theorem. As Table 6 demonstrates, these well-known criteria for statistical inference are more than amply met by the sample *N*s.

Although the above commentary would seem to lay this issue to rest, we decided to pursue this matter one step further. A ten per cent sample of white respondents was selected by means of a random number generator applied to each discrete data point, with region controlled. If the volatility for blacks relative to whites is purely a function of differences in sample size, then a sample of whites severely reduced in size should demonstrate the same volatile pattern as that observed for the blacks. Yet, the ten per cent sample was virtually indistinguishable from the larger sample in both the case of northern and southern whites. This finding plus the information on the sampling frames would appear to eliminate the assumption that the results could be attributed in any meaningful way to the sampling design or the differences in sample size.

Now that we have demonstrated that the observed results could not be meaningfully attributed to sample size or design, and that rising expectations did not characterize the trend of need fulfillment for northern blacks prior to 1964, is there any indication the need fulfillment declined sharply after 1964? Again, if we look at Table 6 and Figure 6, we note a drop from 44 per cent in 1964 who perceived the trend of their finances as improving, to 33 per cent in 1966. This is, however, a smaller drop than took place in the two previous periods of decline, and the relationship stabilized in 1968. Consequently, there is no confirmation of a continual decline after 1964, as the theory would predict.

Turning now to the all-important assumption of relative deprivation theory generally that current need fulfillment is related to expectations of future need fulfillment, this is shown to be generally unsubstantiated (see Table 9). The assumption could be demon-

<sup>23</sup>We wish to thank Leslie Kish and Irene Hess of the sampling section of the University of Michigan's Institute for Social Research for explaining the sampling design to us and clarifying this issue.

<sup>24</sup>The theorem is represented as follows: probability  $(|f/n - p| \geq \epsilon) \rightarrow 0$  as  $N \rightarrow \infty$ ; where  $f$  is the frequency of occurrence of event  $X$  among  $N$  trials,  $p$  is the probability of  $X$ ,  $\epsilon$  is some arbitrarily small positive number. It is generally assumed that good results are produced with  $N$  greater than 30. It also is at this point that the normality assumption of the Central Limit Theorem can be relaxed.

strated as warranted for northern whites, and to a far lesser extent for southern whites; however, in the case of northern blacks it is most untenable. (This result provides another indication of the importance of performing the analysis within specific subgroups as opposed to treating the society or the group as a monolith, a problem inherent in aggregate data analysis.) Consequently, this assumption which is virtually axiomatic to all forms of relative deprivation theory is not as universal as its strategic role demands. This relationship obviously varies from group to group and from circumstance to circumstance. All we can say is that sometimes, and for some groups, future expectations are a function of current need fulfillment, and at other times, and for other groups, this relationship does not hold.<sup>25</sup> Indeed, this is hardly the kind of axiomatic statement on which a science of revolution is to be built.

<sup>25</sup>Ted Robert Gurr informs us (Correspondence 12/27/74) that although he agrees that the linkage between future expectations and current need fulfillment is a fundamental assumption of relative deprivation theory, the relationship may vary within the social structure. In the course of yet uncompleted research (with Raymond Duvall) Gurr has theorized

An important implication of these results is that for blacks, as opposed to whites, perceptions of past experience are not instrumental in shaping perceptions of the future. This would suggest that although whites can rely, to some degree, on past experience as a means of interpreting the future, blacks cannot. It is probably not unwarranted to infer that this is an additional indication of the ambiguous and unstable environment which blacks inhabit.

The data further indicate that instead of the increasingly strong relationship between trend

that individuals in the middle range of attained values (need fulfillment) appear to expect more gains in the future than those at the extremes of the distributions. If Gurr is correct, this would require some critical restatement of the underlying assumptions of relative deprivation theory. Some preliminary analyses that we have undertaken demonstrate that for blacks, those at the lowest end of the continuum have the highest expectations. For example, preliminary runs from SRC's Campbell-Schuman data set indicate that young (18-35) northern, black males are most dissatisfied with their current situation and most optimistic about the future. Needless to say, the issue Professor Gurr raised is an important one that could conceivably have a major impact on relative deprivation theory.

Table 7. Respondent's Perceived Financial Satisfaction by Race and Region

	1956	1958	1960	1962	1964	1966	1968 <sup>b</sup>
North (white)							
(Pretty Well) Satisfied	41%	38%	36%	a	46%	a	26%
(More-or-Less) Satisfied	42	42	42		40		65
Not Satisfied (At All)	17	20	22		14		9
N =	100% (1168)	100% (1163)	100% (1179)		100% (3012)		100% (1684)
North (black)							
(Pretty Well) Satisfied	29% <sup>b</sup>	16%	22%		31%		15%
(More-or-Less) Satisfied	32	26	26		39		65
Not Satisfied (At All)	40	58	52		30		20
N =	101% <sup>c</sup> (63)	100% (86)	100% (76)		100% (185)		100% (109)
South (white)							
(Pretty Well) Satisfied	49%	50%	45%		46%		24%
(More-or-Less) Satisfied	34	34	35		42		66
Not Satisfied (At All)	17	16	20		13		10
N =	100% (429)	100% (465)	100% (553)		101% <sup>a</sup> (1146)		100% (696)
South (black)							
(Pretty Well) Satisfied	24%	30%	17%		32%		12%
(More-or-Less) Satisfied	37	37	42		34		74
Not Satisfied (At All)	39	33	42		35		14
N =	100% (83)	100% (76)	101% <sup>c</sup> (91)		101% <sup>c</sup> (235)		100% (131)

<sup>a</sup>Data unavailable for 1962 and 1966.

<sup>b</sup>In 1968, for "Life Satisfaction" the categories are: Completely Satisfying, Pretty Satisfying, Not Very Satisfying.

<sup>c</sup>Column adds to more than 100 per cent because of rounding.

Table 8. R's Perception of Future Financial Prospects by Race and Region (1956-1968)

	1956	1958	1960	1962	1964	1966	1968
North (white)							
Get better	43%	41%	39%	39%	45%	37%	34%
Stay the same	47	46	50	55	45	51	55
Get worse	10	13	11	6	10	12	10
	100%	100%	100%	100%	100%	100%	99% <sup>a</sup>
N =	(1094)	(1130)	(1107)	(686)	(2884)	(700)	(1644)
North (black)							
Get better	60%	68%	54%	36%	72%	37%	27%
Stay the same	29	26	39	55	24	57	58
Get worse	10	6	8	10	4	6	15
	99% <sup>a</sup>	100%	101% <sup>a</sup>	101% <sup>a</sup>	100%	100%	100%
N =	(58)	(84)	(67)	(42)	(173)	(63)	(110)
South (white)							
Get better	44%	41%	38%	38%	40%	28%	35%
Stay the same	48	46	54	57	51	59	55
Get worse	8	13	8	5	9	13	10
	100%	100%	100%	100%	100%	100%	100%
N =	(396)	(450)	(499)	(358)	(1098)	(287)	(690)
South (black)							
Get better	49%	53%	61%	21%	60%	51%	31%
Stay the same	40	33	31	71	35	36	59
Get worse	10	13	9	8	5	13	11
	99% <sup>a</sup>	99% <sup>a</sup>	101% <sup>a</sup>	100%	100%	100%	101% <sup>a</sup>
N =	(77)	(75)	(81)	(48)	(224)	(45)	(132)

<sup>a</sup>Does not sum to 100% because of rounding error.

Table 9. Correlation Between R's Perceived Trend of Financial Fulfillment and R's Future Financial Expectations by Race and Region

	1956	1958	1960	1962	1964	1966	1968
Northern whites	.39	.39	.39	.41	.50	.44	.44
Southern whites	.22	.45	.29	.37	.28	.54	.42
Northern blacks	.05	-.24	.71	.02	.34	.44	.51
Southern blacks	-.01	.24	.44	.33	.42	.24	.25

of finances and financial expectations, as was predicted by the J-curve theory for the period between 1956 and 1964, northern blacks exhibit an erratic pattern, with correlation coefficients ranging from a low of  $-.24$  in 1958 to a high of  $+.71$  in 1960. Moreover, instead of the coefficients declining after 1964, they actually increase (see Table 9).

The perceptual data indicate that in the case of each of the four hypotheses relating the J-curve to the black urban riots of the 1960s, the theory was rejected. Equally important is the observation that one of the basic axiomatic components of the J-curve theory and relative deprivation theory generally was found to be unconfirmed — that future expectations of need fulfillment are a function of current perceptions of need fulfillment.

It has been suggested that although the J-curve theory as disconfirmed by the data as *an explanation of the urban riots*, this is not sufficient reason for implying a general lack of confidence in the theory. This argument is based on the consideration that Davies may have erred in attempting to extend his theory beyond the parameters for which it was designed. Davies's theory, it has sometimes been asserted, was directed at revolutionary events, and the urban riots, whatever else they may be called, were not revolutionary events. The lack of confirmation in the instance of the urban riots, it has been sometimes further suggested, is simply the result of attempting to explain diverse phenomena with a single dynamic. This argument is worthy of attention for two reasons: (1) It is consonant with arguments of

ferred in behalf of middle-range theories.<sup>26</sup> (2) In a recent communications exchange between Davies and David Snyder writing with Charles Tilly, Davies appears to have made a similar point.<sup>27</sup>

Snyder and Tilly<sup>28</sup> assert that a longitudinal evaluation of political violence in France from 1830 to 1960 does not fit the J-curve. In response, Davies<sup>29</sup> argues that a long, whole-country series analyzing various events of civil disorder is not an adequate test of his theory. Davies implies that his theory need not be expected to account for nonrevolutionary events. In light of his own work, this is a rather astounding argument. Even if one were to view Davies's application of the J-curve to the urban riots as an over-extension of the theory, such a position would hardly be commensurate with Davies's original formulation of the theory or his own previous work. As Snyder and Tilly note, "... Davies himself had applied his scheme to student protests, draft riots, the protests of American blacks in the 1960s not to mention the Pullman strike, the Dorr Rebellion, plus many other conflicts of all shapes and sizes."<sup>30</sup>

If Davies is to be consistent in his contention that Snyder and Tilly's work is irrelevant to his arguments, then it is incumbent upon him to propose a reformulation of the parameters of his own theory. Certainly, the case can be made in terms of middle-range theory that a variety of historical experiences cannot, at this stage of social science, be explained in the context of a single dynamic. In Davies's case, this reconstruction is at best difficult, for the development of the theory itself is based on a diversity of types of civil disorder. Davies's development and previous applications of the theory indicate that the attempt to explain the urban riots is wholly in accord with the theory's general formulation and application. It could not be construed as an attempt to apply the theory outside the parameters for which it was intended.

<sup>26</sup>For a discussion of this position see Robert K. Merton, *Social Theory and Social Structure* (Glencoe, Ill.: The Free Press, 1957), pp. 5-11.

<sup>27</sup>Davies, "Comments [on Snyder and Tilly]," *American Sociological Review*, 39 (August, 1974), 607-612.

<sup>28</sup>David Snyder and Charles Tilly, "Hardship and Collective Violence in France, 1830-1960," *American Sociological Review*, 37 (October, 1972), 520-532.

<sup>29</sup>Davies, "Comments," pp. 607-610.

<sup>30</sup>Snyder and Tilly, "Comments [On Davies]," *American Sociological Review*, 39 (August, 1974), 611.

### The Black Urban Riots: Some Suggestive Theoretical Issues

In the period preceding and during the riots, the black community did not experience a sustained improvement in its economic situation followed by a sharp reversal. Instead of this J-curve scenario, the black community generally and the northern black community specifically displayed dramatic ambiguity and instability in describing the trend of their finances, their financial satisfaction, and their expectations of future financial improvement. These observations were borne out by both the objective and subjective data. The ebbs and flows of the points in any one year may vary from objective data to subjective data. Nonetheless the correspondence in the overall trend remains.

Were these perceptions of instability more marked in the 1960s than in any other previous contemporary period of black history? This we do not know. Even so, the very pattern of the data suggests an alternate explanation of the riots. Here, however, we must tread with caution. Relative deprivation studies typically observe a pattern of data, often aggregate data, together with a concomitant episode of collective or political violence. The two are then interpreted as being related, with some form of relative deprivation, represented by the data configuration, being assumed as the cause of the ensuing violence. In terms of classical considerations of causality and experimental design, this type of deductive reasoning leaves much to be desired.<sup>31</sup> It is, however, the basis for many of the theoretical interpretations of revolution and the underlying causal mechanism of virtually all relative deprivation studies. Sears and McConahay<sup>32</sup> note this type of logic is also the basis for the relative deprivation approach to the study of the black urban riots.

While acknowledging the limitations of such procedures, we must also note the difficulty in obtaining the type of data that would directly link the assumed preconditions of violence with the acts of violence. This is especially true of historical studies of violence, but this problem is also prevalent in studies of contemporary episodes of violence. The research of Gurr,<sup>33</sup>

<sup>31</sup>For a discussion of causal inference in classical experimental design, see Donald T. Campbell and Julian C. Stanley, *Experimental and Quasi-Experimental Design for Research* (Chicago: Rand McNally, 1963).

<sup>32</sup>David O. Sears and John B. McConahay, *The Politics of Violence* (Boston: Houghton Mifflin, 1973), pp. 90-91, footnote 1.

<sup>33</sup>Gurr, *Why Men Rebel*.



Davies,<sup>34</sup> and the Feierabends,<sup>35</sup> to name but a few of the most regarded scholars working in this area, have manifested these inherent and often unavoidable difficulties.

These limitations should not preclude incursions into the problems of collective and political violence. They must, however, caution us about the limitations of our inferences, and make us aware that we are perhaps more engaged in an exploration enterprise than in "confirming" hypotheses.

With such caveats in mind, we are struck by the suggestiveness of our own data. The data demonstrate that the black community generally, and the northern black community particularly, experienced extreme fluctuation and ambiguity in its perceptions of the trend of its finances, its financial satisfaction, and its expectations of financial improvement. These extreme fluctuations and ambiguities of black perceptions might have led to the urban riots of the 1960s.

The pattern of data fits both the theoretical writing by Feierabend et al.<sup>36</sup> based on observations from aggregate data, and the work by Grofman and Muller<sup>37</sup> based on individual data. Feierabend et al. see constant flux and its attendant uncertainties as producing frustration. As they note, "uncertainty is a special quality of expectations. Ambiguity as to whether the future will bring disaster or salvation should be considered a distressful experience, adding to the present sense of frustration. Only in the case of disaster is certainty more likely to be judged as more frustrating than uncertainty."<sup>38</sup> Frustration, of course, leads to aggression; and aggression, under the proper circumstances, will lead to political violence.

Similar observations have been made by Grofman and Muller. They found that "the greatest potential for political violence is manifested both by individuals who perceive negative change . . . and by individuals who perceive positive change . . . , while those who perceive no change manifest the least potential for political violence."<sup>39</sup>

The theoretical and empirical foundations for these observations are anchored in a long tradition of social science research. In his

famous study of suicide, Emile Durkheim<sup>40</sup> noted that anomie could be produced by social disruption irrespective of whether it resulted from economic disaster or an abrupt transformation leading to power and wealth.

Ambiguity, fluctuation, and uncertainty as conditions which contribute to one's susceptibility to be mobilized for revolt have been addressed in the works of Barrington Moore, Jr.,<sup>41</sup> Michael Aiken,<sup>42</sup> Seymour Martin Lipset,<sup>43</sup> Norman Cohn,<sup>44</sup> and Murray Edelman.<sup>45</sup> In a speculative essay, Edelman has applied this interpretation directly to the black urban riots. He argues that man's expectations of the distant future influence the cognitions that explain his current situation. The important expectations of status and security come from governmental acts. The inconsistent fluctuation between responsiveness and nonresponsiveness to black needs by the government produced alienation, fear, and anger. In this climate, Edelman notes, a precipitating incident can easily touch off violence. Moreover, he goes on to argue, the greatest ambiguity existed for northern blacks.<sup>46</sup>

The interpretation suggested by our perceptual data is highly congruent with these theoretical statements that fluctuation, change, and ambiguity create situations highly conducive to violence. Edelman's suggestion that ambiguity is greatest among the northern blacks is also confirmed by our perceptual data.

What can be said with some confidence is that the black community generally and the northern black community specifically experienced a great deal of perceptual uncertainty with regard to their financial situation and their expectations of their future financial circumstances. We can also argue that there is at least a substantial set of theoretical and empirical work to indicate that such conditions have a high probability of precipitating political violence. It is at least plausible to note that the pattern of fluctuation and change and the attendant perceptual ambiguities may be components of the causal nexus that culminated in

<sup>34</sup>Davies, "The J-curve."

<sup>35</sup>Feierabend et al., "Social Change."

<sup>36</sup>*Ibid.*

<sup>37</sup>Grofman and Muller, "The Strange Case of Relative Gratification."

<sup>38</sup>Feierabend et al., "Social Change," p. 637.

<sup>39</sup>Grofman and Muller, p. 514.

<sup>40</sup>Emile Durkheim, "Anomie and Suicide," in *Sociological Theory*, ed. Lewis A. Coser and Bernard Rosenberg (New York: MacMillan, 1970), p. 529.

<sup>41</sup>Moore, "Revolution in America."

<sup>42</sup>Aiken et al., *Economic Failure, Alienation and Extremism*.

<sup>43</sup>Lipset, *Political Man*.

<sup>44</sup>Norman Cohn, *The Pursuit of the Millennium* (New York: Harper Torchbooks, paperback, 1961), p. 319.

<sup>45</sup>Edelman, *Politics as Symbolic Action*.

<sup>46</sup>*Ibid.*, pp. 20-21.

the black urban riots. Certainly, this argument is no less plausible nor less buttressed by empirical evidence than most of the current explanations of the riots. The difficulty resides in the linkage between the pattern of the data on the one hand and the violence on the other. Until it is possible to bridge this chasm in a causally meaningful fashion, our results must remain suggestive avenues for further research.

### Summary

The purpose of this research was to test the J-curve theory in the context of the black urban riots by using both perceptual and objective indicators. The results demonstrate that the J-curve theory is not a valid explanation of the riots. Several empirical, methodological, and conceptual problems were also noted. These basically revolved about the regrettable tendency of researchers to test a theory based on individual perception with aggregate and objective data.

The research demonstrated that: (1) Aggregate indicators can be highly misleading substitutes for individual indicators. The J-curve's use of an aggregate index to measure black frustration was found, upon examination of the same measure based on individual data, to be highly misleading. Moreover, the inappropriateness of the operationalization was concealed by the process of aggregation. (2) Objective indicators cannot be used as direct substitutes for perceptual indicators, even when both are based on individual data. There is, however, some indication from our analysis that while substitutions are unwarranted on a point-by-point basis, substitutions may be justified when based on the overall trend of the data. The generality of this conclusion, however, awaits further confirmation. (3) Regardless of the nature of the data configuration, societies cannot be viewed as monoliths. It is imperative that specifications and distinctions be made for various groups. As our data show, trends for the total black population often obscured crucial divergencies between northern and southern blacks. Relative deprivation-based theories that treat societies as monoliths may well conceal as much as if not more than they reveal. If statements such as "revolutions are most likely to occur when things get better" are to have any theoretical meaning, then it must be demonstrated for whom things have gotten better. Is it indeed the revolutionary class? When unspecified data demonstrate that things improved for the society as a whole, can we be sure that things did not simultaneously get worse for the revolutionary class? Is it the rising

expectations resulting from overall improvement that caused the revolution? Or is it an increasing gap between the revolutionary class which experiences no improvement, and the rest of the society that experiences increased need satisfaction? The monolithic approach cannot assist the student of revolution in resolving such questions and may well lead to deceptively simple answers. (4) The critical assumption of the J-curve theory and relative deprivation theory generally that future expectations of need fulfillment are a function of current need fulfillment trends was shown to be largely unsubstantiated. The data did indicate modest correlations for these two variables for northern whites, and to a lesser extent for southern whites and southern blacks. There was no basis for this assumption when applied to the crucial northern black community. Since this assumption is one of the axioms of the J-curve, its consequent lack of verification should at least raise the question of how the axioms of the J-curve might be restructured to accommodate this information.

To students of revolution who have used relative deprivation type theories, this research advises caution. Such caution ensues from a firmer recognition of the problems of analysis of historic revolutionary events that derive from data which are of necessity based on aggregate, objective indicators. Such analysis might be thoroughly misleading, as this research has demonstrated. This factor has even caused some researchers to forsake relative deprivation theory as an explanatory device. Such rejection is not based on theoretical limitations but on the inability to fit relative deprivation theory to appropriate data. At the same time, if our observation is correct that even in the absence of point-by-point correlations between objective and subjective indicators, there is consistency between the overall trends, relative deprivation theory might still have great promise. It remains for research to be directed at this problem through simultaneous analysis at both the individual and aggregate levels.

Finally, we propose some avenues for further research on the substantive issue of the etiology of the black urban riots. The cycles of fluctuation and change that emerged from our analysis of perceptual data fit an extensive theoretical literature on the causes of civil disorder and revolution. Although we are reluctant to follow many of our colleagues across the inferential chasm that depicts a causal relationship when a diagrammatic configuration of relative deprivation exists in the same temporal space as an act of violence, the congruence of our findings with other theoretical

statements suggests that the fluctuation-change hypothesis might well be a fruitful area for further research into the causes of the black urban riots.